

CLAIMS

What is claimed is:

1. A network that facilitates interactions between one of a plurality of software components in a electronic device and an associated one of a plurality of servers in the network, the network comprising:

 a service broker capable of receiving at least one request for service associated with one of the plurality of software components;

 the service broker capable of determining the one of the plurality of servers associated with the one of the plurality of software components, based upon the at least one request for service; and

 the service broker capable of forwarding the at least one request for service to the determined one of the plurality servers.

2. The network of claim 1 further comprising:

 the service broker capable of selectively communicating a response from the determined one of the plurality of servers to one of the plurality of software components in the electronic device.

3. The network of claim 1 wherein the service broker is a software component in the electronic device.

4. The network of claim 1 wherein one of the plurality of servers comprises a download server capable of receiving a request for an update package, the download server capable of sending the requested update package to one of the plurality of software components in the electronic device.

5. The network of claim 4 wherein the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component.

6. The network of claim 4 wherein the service broker forwards the update package to at least one of the plurality of software components in the electronic device.

7. The network of claim 1 wherein one of the plurality of software applications in the electronic device comprises an update agent capable of processing an update package, the update agent capable of being invoked by the service broker when an update package is communicated to the electronic device.

8. The network of claim 7 wherein the update package comprises a set of executable instructions for converting a first version of a software component to a second version of the software component.

9. The network of claim 1 wherein:
the at least one request for service comprises an asynchronous request; and
the service broker capable of communicating a response received from one of the plurality of servers back to the one of the plurality of software components.

10. The network of claim 1 wherein:
the at least one request for service comprises an asynchronous request;
the one of the plurality of software components registers callback information with the service broker; and
the service broker communicates a response received from one of the plurality of servers back to the one of the plurality of software applications based upon the registered callback information.

11. The network of claim 1 wherein the service broker is a server communicatively coupled to the electronic device.

12. The network of claim 11 wherein the service broker server determines which one of the plurality of servers is available and capable of processing the at least

one service request, and subsequently forwards the request to the determined one of the plurality of servers.

13. The network of claim 12 wherein the determined one of the plurality of servers is forwarded the at least one request for processing, and a response from the determined one of the plurality of servers is forwarded to the one of the plurality of software components.

14. The network of claim 12 wherein the determined one of the plurality of servers:

processes the at least one service request, the at least one service request comprising a request for a software update from the one of the plurality of software components;

retrieves an update package and associated information; and

communicates the update package and associated information to the electronic device.

15. The network of claim 14 wherein:

the plurality of software components comprises a download agent and an update agent;

the download agent is capable of requesting a software update from the service broker server, and receiving in response an update package from the service broker server; and

the update agent is capable of processing the received update package for updating at least one of firmware and software in the electronic device.

16. A wireless network supporting at least one electronic device, the network comprising:

a service broker;

a plurality of service providers, each of the plurality of service providers communicatively coupled to the service broker;

a client-side component in the electronic device that requests a software update from one of the plurality of service providers; and

the service broker determining the appropriate one of the plurality of service providers capable of responding to the software update request.

17. The wireless network of claim 16 further comprising:

a generic intelligent responsive agent in the electronic device, the generic intelligent responsive agent communicatively coupled to the service broker;

the generic intelligent responsive agent capable of establishing a communication link with the service broker server;

the generic intelligent responsive agent capable of forwarding the software update request and associated information from the client-side component to the service broker;

and

the service broker server determining one of the plurality of service providers as a target server capable of processing the software update request and forwarding the software update request to the target server.

18. The wireless network of claim 17 wherein the target server:

processes the received software update request;

retrieves an appropriate update package and associated information; and

communicates the appropriate update package and associated information back to the generic intelligent responsive agent for subsequent communication to an associated client-side component.

19. The wireless network of claim 18 wherein the generic intelligent responsive agent:

acts as a proxy for the client-side component; and
provides one of asynchronous communication and synchronous communication facilities for interactions with the target server.

20. The wireless network of claim 19 wherein the electronic device further comprises:

a registration client capable of maintaining a plurality of registration entries, each registration entry associated with a client-side software component, each entry comprising at least one of a name, a version, a plurality of dependencies, a status that specifies current operational status, a plurality of callback functions, an associated parameter, an event, and a return type;

a set of configuration parameters;
a client-side software component specific update agent capable of updating at least one of the set of configuration parameters and the client-side software component; and

a server URL that specifies a service provider and associated relevant information.

21. The wireless network of claim 20 wherein the electronic device further comprises security information.
22. A method for updating at least one of a software component and software component configuration information in a electronic device communicatively coupled to a service broker, the method comprising:
 - under the control of the electronic device,
 - registering at least one call-back function available in the software component;
 - communicating, to the service broker, a request for updating of at least one of the software component and software component configuration;
 - receiving results from a remote service provider; and
 - invoking the at least one call-back function using the received results,
 - under the control of the service broker,
 - receiving an update request;
 - determining a service provider based upon the update request;
 - invoking update functionality on the determined service provider; and
 - transmitting results of the invoked update functionality to the mobile device.
23. The method according to claim 22 further comprising:
 - under the control of the electronic device,

communicating the received results to an update agent capable of updating the at least one of the software component and software component configuration.

Claim 24. The method according to claim 22 further comprising:
under the control of the electronic device,

communicating a request by the software component to a generic intelligent responsive agent, the request comprising a command to be invoked on a remote service provider and parameters to be passed to it;

communicating the request to the service broker; and

communicating the received results to the software component,
under the control of the service broker,

receiving an update request;

determining a service provider based upon the update request;

invoking update functionality on the determined service provider; and

transmitting results of the invoked update functionality to the generic intelligent responsive agent.